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THE OPERATIVE TREATMENT OF UMBILICAL HERNIA, BY R. H. PARRY, F.R.C.S.Ed.

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During the past four years it has fallen to my lot to examine in hospital and in private practice a large number of cases of umbilical hernia.

I propose to arrange them, in respect of operative treatment, into three groups: (*a*) Operable, (*b*) Doubtful, (*c*) Inoperable. A brief statement of the leading features of each of these varieties is necessary in order to make the meaning of the terms clearly understood.

(*a*) *Operable.*—The hernia does not exceed in size a hen's egg. The bowel is easily reduced, and the amount of omentum adherent to the sac is not large. The opening admits of one or two fingers, and its margin is well defined.

The patient should be in good health, and not over 40 years of age. Two other favourable features may be mentioned: first, that the hernia has not been in existence for more than two years, and second, that the patient is not putting on fat rapidly.

(*b*) *Doubtful.*—The hernia varies in size from that of an orange to that of a foetal head. The contents are made up of a considerable quantity of omentum which occupies a number of pouches in the wall of the sac, and to which it is usually firmly adherent. The opening admits of three or more fingers in addition to the pedicle of the omentum. The recti are pushed apart, and when the erect attitude is assumed the hernia

increases, becomes larger in size, and ill-defined at its base. The patient is approaching 50, is stout, and experiences considerable discomfort when obliged to lie on her back for more than a few hours. A cough, erythema intertrigo, or haemorrhoids, common in these cases, may interfere with healing and permanent good result from an operation.

(*c*) *Inoperable.*—The patient is about or over 50, is very stout, has a large pendulous abdomen, and attributes the great increase in the size of the hernia to attacks of sickness with vomiting, to the strain of coughing, or to her stoutness. All the anatomical changes mentioned in connection with the doubtful cases are here much exaggerated, and it would seem as if the abdomen were too small to receive the contents of the sac even after excision of the omental part of the hernia. Approximation of the recti would be impossible, and closure of the ring would be effected with extreme difficulty, and would involve so much strain upon the ligatures that in all probability they would yield and be absorbed before perfect union had taken place.

In respect of the relative frequency of the different groups, the operable together with the most promising of the doubtful series were in a minority: the inoperable formed a large majority.

Nearly all the patients had at one time or another worn a truss or some form of abdominal support, and the universal opinion was decidedly unfavourable to that method of treatment.

The results of the modern treatment of inguinal and femoral hernia prove quite conclusively that a cure is effected in the majority of cases, and the fact is so well recognized and admitted that it seems unnecessary to adduce statistics. It is, however, important to remember that a permanent good result depends largely, though not solely, upon the restoration of the parts to their normal position.

This is easily accomplished in inguinal hernia, as operative treatment is now resorted to at an earlier stage, before the valvular character of the canal is lost and the natural oblique passage is changed into a direct opening.

The frequent relapses in the early history of the radical operation were due to difficulties in rendering the support efficient when a direct opening was concerned, and the fact holds good at the present time and is thoroughly appreciated by surgeons in the treatment of femoral hernia. It remains to be said, however, that even in the latter form of hernia the bowel can be prevented leaving the abdomen, and a fair guarantee of success given if the crural ring is not unduly large. The author has a number of cases under observation operated on over five years ago which have shown so far no signs of relapse.

The treatment of umbilical hernia by operation has not received from surgeons and teachers the attention the importance of the subject deserves. It has been the practice to gloat over the size of the hernia rather than to point out to the student the advantage of early operation and the conditions upon which success depends. It must, however, be conceded that many of the procedures for the closure of the umbilical opening have not met with much favour: and, further, it must be admitted that surgical literature does not proclaim many cures after surgical interference.

I append the history of my first case operated on four years ago, and, as the patient has remained perfectly well and is at the present time in the enjoyment of excellent health, I am disposed to consider that the measures I then adopted and have since practised in other cases have withstood the test of time, and have proved quite effectual. I would again impress upon those who come across cases of umbilical hernia the fact that success is largely bound up with anatomical factors, and that these can only be controlled in the early development of the hernia.

CASE.

Mrs. S., aged 52 years, was seen in consultation with Dr. Macmillan, Pollokshields, in October, 1895.

At the time of my visit she was recovering from a severe

attack of pain and vomiting, brought on by a mass of omentum and bowel being retained in the sac. She had had a number of such attacks, but this she declared was the worst. Her condition had given rise to some alarm on a previous occasion, and at the consultation which was then held her medical attendant suggested that operative measures should be taken to prevent a recurrence of the attacks, but the surgeon gave no hopes that operative interference would gain that end. The case appeared to me to be a favourable one for operation. The patient was in excellent health, and promised to be a good subject in every way. The hernia was about the size of a Tangerine orange, contained adherent omentum but no bowel. When the bowel slipped into it it became much larger. The opening admitted of two fingers, which was not large considering the hernia had been in existence for some years.

Operation.—*Preparation of Patient.*—Careful dieting and attention to the state of the bowels are important means of preventing sickness and much abdominal discomfort. If the patient can be persuaded to be in bed for a week or ten days, to accustom herself to the dorsal position and to the use of the bed pan, it will be found to greatly simplify the after-treatment.

Details of Operation.—A vertical median incision is made, and the skin and sac are divided the entire length of the tumour. Adherent omentum is detached and returned into the abdomen, or removed as may seem best to the operator.

The sac is separated from the skin and fat down to the outer margin of the ring, any adherent points being divided with scissors. The forefinger of the left hand is introduced within the ring to guide the knife, which is made to divide the fascia continuous with the sheath of the rectus at the point where it becomes blended with the peritoneum of the sac.

Latterly I have used a pair of fine, blunt-pointed scissors to divide the fascia, thus minimizing the danger of puncturing the sac and of injuring its vessels.

The separation of the peritoneum within the ring must be conducted with great care, as all the structures at this point

are pretty firmly joined together. It is best accomplished by pulling the rectus aside and dividing any unseparable adhesion with scissors or knife. Beyond the ring the peritoneum separates readily, and it should be stripped from the sheath of the rectus for about three-quarters of an inch to provide room for the body of the sac.

The sac is now returned into the abdomen, and fixed in position by two lateral or median ligatures—one passing through the structures at the upper angle, and the other at the lower. The recti are now more thoroughly exposed and brought together by stout cat-gut sutures. The sutures pick up in the first instance the muscle on one side, and the ends are carried beneath the one on the opposite side and brought out at a point three-quarters of an inch in from the free edge. This slight overlapping of the muscles efficiently supports the sac, and supplies the best protective barrier to the hernia. Silk-worm sutures are passed through skin, fat, fascia, and superficial parts of recti, to obliterate any trace of a cavity between these structures and to avoid the necessity for any form of drainage. A continuous suture of cat-gut is now passed through the fascia at the margins of the ring, and the superficial sutures are then finally tied.

A broad elastic bandage keeps the dressing in place, and supports the abdomen generally. After six or eight weeks in bed, the patient is allowed to move about as usual, wearing a light abdominal belt.